



### NEPTUNE 300W 72 Cell

#### Product Performance

- 6" n-type, mono crystalline bifacial solar cells
- N-type module efficiency (6" one side module: 290 ~ 330Wp)
- Advanced ECN cell production technology
- Double fine line printing and plating
- Selective back surface field
- Advanced busbar design

#### Key Features:

- **Module Efficiency:** High module conversion efficiency of 17%
- **Mechanical load specifications:**
  - Snow load – 5400 Pascal
  - Wind load – 2400 Pascal
- **Tolerance:** Positive tolerance up to +3%
- **Performance:** Excellent performance in low light irradiance environments
- **Quality:** Modules are 100% EL sorted

#### Long Term Reliability, High Quality and Highly Durable Product

- **Non LID (Light Induced Degradation)**  
Production of high quality cells, manufactured using n--type wafer substrate. Module output degradation does not occur due to LID effect upon outdoor exposure.
- **Non PID (Potential Induced Degradation)**  
Using a non PID EVA in our manufacturing process in combination with n--type wafer and cell process, makes our solar modules a true PID free product.
- **Weather Resistant**  
Anti--corrosion technology applied in the production of products limits corrosion due to external environment exposure, sulfur (industrial zone), ammonia (rural), chloride (coastal areas) and by temperature and humidity.



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## Electrical Specifications

Electrical parameters at Standard Test Condition (STC)

Module type			NEPTUNE290W	NEPTUNE295W	NEPTUNE300W	NEPTUNE305W	NEPTUNE310W	NEPTUNE315W	NEPTUNE320W	NEPTUNE325W	NEPTUNE330W
Power output	$P_{max}$	$W_p$	290	295	300	305	310	315	320	325	330
Short-Circuit Current	$I_{sc}$	A	8.72	8.79	8.86	8.94	9.01	9.08	9.15	9.23	9.30
Open Circuit Voltage	$V_{oc}$	V	44.5	44.8	45.2	45.6	45.9	46.3	46.7	47.0	47.4
Rated Current	$I_{mp}$	A	8.12	8.19	8.26	8.32	8.39	8.45	8.52	8.59	8.65
Rated Voltage	$V_{mp}$	V	36.0	36.3	36.6	36.9	37.2	37.5	37.8	38.1	38.4

STC: Irradiance 1000 W/m<sup>2</sup> Cell temperature of 25°C, AM 1.5

## Temperature Coefficients

Normal Operating Cell Temperature(NOCT)	45°C (±2°C)
Temperature coefficient of Pmax	-0.5% per deg C
Temperature coefficient of Vmp	-0.4% per deg C
Temperature coefficient of Imp	0.05% per deg C

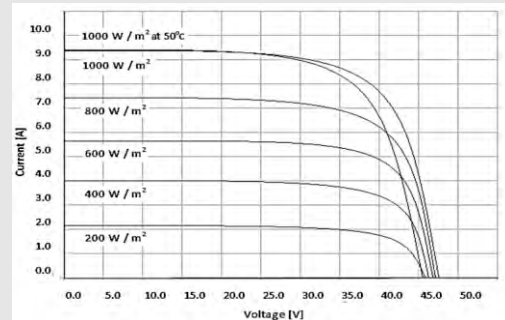
## Operating Conditions

Maximum System Voltage	1000VDC for UL
Operating Temperature Range	-40°C (-40°F) to +90°C (194°F)
Maximum Series fuse Rating	15A
Fire Safety Classification	Class C
Static Load Wind/Snow	2400Pa/5400Pa

## Mechanical Data

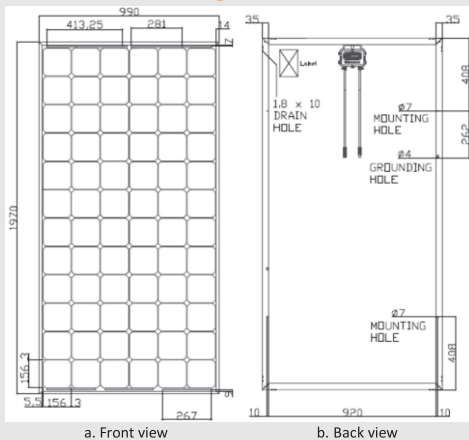
Solar Cells	Bifacial N- type Mono – Crystalline Silicon (6 inches)
Cell orientation	72 cells (6x12)
Module dimension	1970mm x 990mm x 40mm (77.5591 in. x 38.9764 in. x 1.5748 in.)
Weight	25 kg (55.1 lb)
Front Glass	4.0mm(0.16 inches) tempered, Low-iron, Anti-reflective coating
Frame	Anodized aluminum alloy
Encapsulant	Ethylene vinyl acetate(EVA)
J-Box	Protection class IP65 with bypass-diode
Cables	PV wire, 1.2m(47.2 inches), 4mm <sup>2</sup> / 12 AWG
Connector	Amphenol H4

## NEPTUNE300W 72 Cell Solar Module Current-Voltage Curve



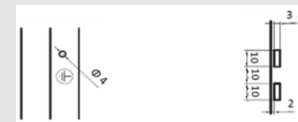
Current-voltage characteristics with dependence on irradiance and module temperature

## Basic Design (Units: mm)



c. Frame section

d. Mounting slots



e. Grounding holes

f. Drainage holes